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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,897	03/19/2001	Kiyoshi Yamaura	09792909-4813	7625

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EXAMINER

YUAN, DAH WEI D

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

HG

**Office Action Summary**

Applicati n No.

09/811,897

Applicant(s)

YAMAMUA

Examiner

Dah-Wei D. Yuan

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-- The MAILING DATE of this communication appears n the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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**NON-AQUEOUS ELECTROLYTE CELL WITH LITHIUM-TRANSITION  
METAL COMPOUND OXIDE**

Examiner: Yuan

S.N. 09/811,897

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May 16, 2003

**Detailed Action**

1. The Applicant's amendment filed on April 8, 2003 was received. The title of the invention was changed. Claim 5 was amended.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action (Paper No. 5).

***Claim Objections***

3. The claim objections on claims 5 are withdrawn because the claim has been amended.

***Claim Rejections - 35 USC § 102***

4. The claim rejections under 35 U.S.C.102(e) as being anticipated by Negoro (US 6,232,021 B1) on claims 1-5 are maintained. The rejection is repeated below for convenience.

Negoro teaches a non-aqueous electrolyte battery comprising a positive electrode, a negative electrode and a non-aqueous electrolyte interposed between the positive and negative electrode. The positive electrode active material includes  $\text{Li}_x\text{MnO}_2$  wherein  $x=0.7$  to  $1.2$ . The electrolytic solution comprises an appropriately mixed solvent of ethylene carbonate, propylene carbonate, 1,2-dimethoxyethane, dimethyl carbonate, and/or diethyl carbonate and salts of at least one of  $\text{LiCF}_3\text{SO}_3$ ,  $\text{LiClO}_4$ ,  $\text{LiBF}_4$  and  $\text{LiPF}_6$ . See Column 58, Lines 26-40; Column 63,

Lines 11-15. With respect to claim 2, it is the position of the examiner that such spatial group is inherent, given that the compound in both Negoro and the present application having similar chemistry. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature *is necessarily present in that which is described in the reference*. In re Robertson, 49 USPQ2d 1949 (1999).

5. The claim rejections under 35 U.S.C.102(e) as being anticipated by Kihira et al. (US 6,316,147 B1) on claims 1-5 are maintained. The rejection is repeated below for convenience.

Kihira et al. teach a non-aqueous electrolyte battery comprising a positive electrode, a negative electrode and a non-aqueous electrolyte interposed between the positive and negative electrode. The positive electrode active material includes  $\text{Li}_x\text{MO}_2$  wherein  $x=0.05$  to  $1.1$  and M is selected from the group consisting of Co, Ni and Mn. The electrolytic solution comprises an appropriately mixed solvent of ethylene carbonate or propylene carbonate with dimethyl carbonate or diethyl carbonate and salts of at least one of  $\text{LiCF}_3\text{SO}_3$ ,  $\text{LiClO}_4$ ,  $\text{LiBF}_4$  and  $\text{LiPF}_6$ . See Column 6, Lines 10-67. With respect to claim 2, it is the position of the examiner that such spatial group is inherent, given that the compound in both Kihira et al. and the present application having similar chemistry. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature *is necessarily present in that which is described in the reference*. In re Robertson, 49 USPQ2d 1949 (1999).

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6. The claim rejections under 35 U.S.C.102(e) as being anticipated by Dahn et al. (US 6,168,887 B1) on claims 1-5 are maintained. The rejection is repeated below for convenience.

Dahn et al. teach a non-aqueous electrolyte battery comprising a positive electrode, a negative electrode and a non-aqueous electrolyte interposed between the positive and negative electrode. The positive electrode active material includes  $\text{Li}_x(\text{Mn}_{1-y}\text{M}_y)\text{O}_{2+z}$  wherein  $0.5 < x < 1.3$ ,  $y$  is  $0 \leq y < 0.4$ ,  $z$  is  $-0.5 < z < 0.5$  and  $M$  is a 3d transition metal, aluminum or lithium and admixtures thereof. In one embodiment, 1M of  $\text{LiPF}_6$  in 33% ethylene carbonate (EC) and 67% diethyl carbonate (DEC) is used as the electrolyte. See Column 3, Lines 25-20; Example 4. With respect to claim 2, it is the position of the examiner that such spatial group is inherent, given that the compound in both Dahn et al. and the present application having similar chemistry. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature *is necessarily present in that which is described in the reference*. In re Robertson, 49 USPQ2d 1949 (1999).

### ***Response to Arguments***

7. Applicant's arguments filed on April 8, 2003 have been fully considered but they are not persuasive.

*Applicant's principle arguments are*

*Applicants find surprising and unexpected benefits of increased discharge capacity that are attributed to a very limited range of  $0.94 \leq x \leq 0.96$  in the  $\text{Li}_x\text{MnO}_2$  or  $\text{Li}_x\text{Mn}_{1-y}\text{Al}_y\text{O}_2$  compound.*

In response to Applicant's arguments, please consider the following comments.

Evidence that a compound is unexpectedly superior in one of a spectrum of common properties... can be enough to rebut a *prima facie* case of obviousness." No set number of examples of superiority is required. *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987). See MPEP 716.02 "Allegations of Unexpected Results". In the instant case, the three references cited above are anticipatory on the limitations of claim, therefore, the arguments based on unexpected result of increased discharge capacity cannot overcome anticipation of claims.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (703) 308-0766. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Dah-Wei D. Yuan  
May 19, 2003

  
CAROL CHANEY  
PRIMARY EXAMINER